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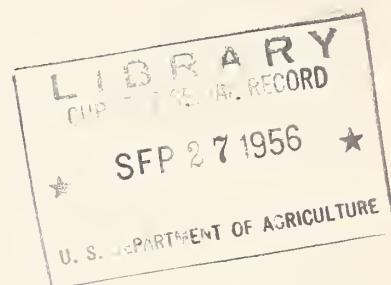
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UNITED STATES DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division



FIBER AND SPINNING TEST RESULTS FOR SOME VARIETIES OF COTTON
GROWN BY SELECTED COTTON IMPROVEMENT GROUPS
CROP OF 1956

Prepared in the Standards and Testing Branch

Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956

Test item	Coker 100 W			Deltapine 15		
	Georgia			Louisiana :Mississippi		
	Arlington:	Baxley	Sandersville:	Villa Platte:	Clarksdale	
	Early	Early	Early	Early	Early	
Raw Cotton Quality						
Grade (official standards)	M	SM	M	M	M	
Staple length-----inches:	1-1/32	1-1/16	1-1/32	1-1/32	1-1/32	
Fiber length (Fibrograph):						
Upper half mean-----inches:	1.04	1.03	1.02	1.02	1.04	
Uniformity ratio-----	78	79	80	79	81	
Micronaire-----units 1/:	4.0	4.3	3.8	4.7	4.2	
Fiber fineness-micrograms per in.2/:	4.1	4.2	3.9	4.8	4.5	
Fiber maturity-----index 2/:	77	79	75	80	76	
Fiber tensile strength: (Pressley)						
1/8" gauge-----index 3/:	95	102	105	105	110	
Zero gauge-----1,000 p.s.i.:	75	78	82	84	84	
Nonlint content-----percent:	3.5	2.2	2.2	3.3	2.9	
Color of raw cotton: 4/						
Reflectance-----R _d :	75.6	76.5	74.3	75.5	71.5	
Yellowness-----+b:	8.5	8.6	9.0	9.6	8.6	
Sugar content-----percent:	0.2	0.3	0.1	0.3	0.2	
Acid-alkaline value-----pH units 5/:	7.5	7.8	7.6	7.8	7.8	
Processing Results						
Picker and card waste-----percent:	8.9	8.3	7.9	8.6	8.0	
Neps----per 100 sq. in. of card web:	19	23	25	14	15	
Yarn skein strength:						
22s-----pounds:	118	126	132	118	125	
50s-----pounds:	41	43	46	39	43	
Average break factor 6/	2323	2461	2602	2273	2450	
Yarn appearance:						
22s-----grade:	C+	C+	C+	B+	B	
50s-----grade:	C+	C	C	C+	C+	
Average index 7/	100	95	95	110	105	

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15				
	Mississippi:	Texas			
	Doddsville	Bryan		Lyford	Port Lavaca
	Early	Early	Midseason	Late	Midseason
Raw Cotton Quality					
Grade (official standards)	M	M	M	M	SM
Staple length-----inches	1-1/32	31/32	1	1-1/32	31/32
Fiber length (Fibrograph):					
Upper half mean-----inches	1.06	1.00	1.05	1.01	.90
Uniformity ratio-----	81	81	82	82	81
Micronaire-----units 1/	5.2	4.5	5.0	4.0	4.1
Fiber fineness---micrograms per in. 2/	4.9	4.5	4.8	4.0	4.1
Fiber maturity-----index 2/	84	80	82	77	77
Fiber tensile strength: (Pressley)					
1/8" gauge-----index 3/	114	108	108	97	100
Zero gauge-----1,000 p.s.i.	84	83	84	80	83
Nonlint content-----percent	3.0	2.4	2.8	2.5	2.7
Color of raw cotton: 4/					
Reflectance-----Rd	71.7	72.5	77.6	77.9	75.5
Yellowness-----+b	8.9	9.0	8.3	9.0	9.5
Sugar content-----percent	0.1	0.2	0.3	0.2	0.4
Acid-alkaline value-----pH units 5/	7.5	7.0	7.6	6.9	6.8
Processing Results					
Picker and card waste-----percent	8.5	7.0	7.8	7.7	9.0
Neps-----per 100 sq. in. of card web	20	15	12	13	11
Yarn skein strength:					
22s-----pounds	121	119	119	113	104
50s-----pounds	41	40	40	38	34
Average break factor 6/	2356	2309	2309	2193	1994
Yarn appearance:					
22s-----grade	B	B	B	B	B
50s-----grade	C	C+	C	C+	C+
Average index 7/	100	105	100	105	105

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Deltapine 15					:DPL (TPSA)
	Texas					
	Port Lavaca:	Navasota :	Sugarland		: Danevang	
	Late	Midseason:	Midseason :	Late	Midseason	
<u>Raw Cotton Quality</u>						
Grade (official standards)	SM	M	M	M		SIM
Staple length-----inches:	31/ 32	1	1	1		1
Fiber length (Fibrograph):						
Upper half mean-----inches:	.94	1.05	.98	.98		.95
Uniformity ratio-----	82	80	82	81		82
Micronaire-----units 1/:	4.2	4.5	4.5	3.6		4.0
Fiber fineness---micrograms per in. 2/:	4.2	4.5	4.2	3.6		4.1
Fiber maturity-----index 2/:	78	80	82	75		76
Fiber tensile strength: (Pressley)						
1/8" gauge-----index 3/:	97	113	104	104		100
Zero gauge-----1,000 p.s.i.:	83	86	89	88		81
Nonlint content-----percent:	3.6	3.3	2.4	3.8		3.4
Color of raw cotton: 4/						
Reflectance-----R _d :	74.5	76.0	75.5	77.5		77.5
Yellowness-----+b:	8.3	8.9	9.1	8.7		8.6
Sugar content-----percent:	0.2	0.3	0.2	0.2		0.3
Acid-alkaline value-----pH units 5/:	7.6	7.7	7.8	7.9		7.7
<u>Processing Results</u>						
Picker and card waste-----percent:	9.3	8.6	7.9	9.7		8.6
Neps-----per 100 sq. in. of card web:	17	21	13	12		17
Yarn skein strength:						
22s-----pounds:	105	120	120	118		109
50s-----pounds:	35	41	41	40		37
Average break factor 6/:	2030	2345	2345	2298		2124
Yarn appearance:						
22s-----grade:	B	C+	B	C+		C+
50s-----grade:	C+	C	C+	C+		C
Average index 7/:	105	95	105	100		95

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

	Deltapine (TPSA)			Delfos 9169	Dixie King
	Texas			Mississippi	
	Edcouch	Harlingen	Weslaco	Corpus Christi	Indianola
	Late	Late	Late	Late	Early
Raw Cotton Quality					
Grade (official standards)	M+	M	M	SM	SM
Staple length-----inches	1-1/32	1-1/32	1	31/32	1-1/16
Fiber length (Fibrograph):					
Upper half mean-----inches	1.01	1.00	1.02	1.00	1.03
Uniformity ratio-----	80	80	83	80	81
Micronaire-----units 1/	4.3	4.0	4.3	3.6	4.5
Fiber fineness-micrograms per in. 2/	4.1	3.9	4.3	3.7	4.5
Fiber maturity-----index 2/	80	77	78	74	79
Fiber tensile strength: (Preasley)					
1/8" gauge-----index 3/	100	100	97	96	104
Zero gauge-----1,000 p.s.i.	77	80	77	84	94
Nonlint content-----percent	2.4	2.6	2.2	2.4	3.6
Color of raw cotton: 4/					
Reflectance-----Rd	77.0	75.4	77.5	78.5	76.0
Yellowness-----+b	8.6	8.3	8.8	9.2	8.8
Sugar content-----percent	0.3	0.3	0.2	0.3	0.3
Acid-alkaline value-----pH units 5/	7.0	7.0	7.1	7.0	7.7
Processing Results					
Picker and card waste-----percent	7.0	7.5	7.4	7.8	7.8
Neps-----per 100 sq. in. of card web	17	17	14	19	17
Yarn skein strength:					
22s-----pounds	115	114	111	105	118
50s-----pounds	40	38	38	35	41
Average break factor 6/	2265	2204	2171	2030	2323
Yarn appearance:					
22s-----grade	B	B	B	B	B
50s-----grade	C+	C+	C	C	C
Average index 7/	105	105	100	100	100

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Table 1.--Results of classification, fiber tests, and carded yarn processing tests for specified varieties of cotton by state, market area, and period of harvest, processed at a card production rate of 9-1/2 pounds per hour, crop of 1956--Continued

Test item	Lankart 57					
	Texas					
	Cooper Early	Hillsboro Early	Odem Late	Waco Early	Waxahachie Early	
Raw Cotton Quality						
Grade (official standards)	SM	M	SM	Mltsp	M	
Staple length-----inches	7/8	7/8	31/32	13/16	7/8	
Fiber length (Fibrograph):						
Upper half mean-----inches	.88	.86	.94	.85	.89	
Uniformity ratio-----	81	83	81	82	80	
Micronaire-----units 1/	4.1	3.8	4.2	3.7	3.7	
Fiber fineness---micrograms per in. 2/	4.2	4.1	4.4	4.2	4.0	
Fiber maturity-----index 2/	76	73	77	72	72	
Fiber tensile strength: (Pressley)						
1/8" gauge-----index 3/	99	101	105	101	104	
Zero gauge-----1,000 p.s.i.	88	83	83	82	87	
Nonlint content-----percent	4.0	5.0	3.2	3.0	4.8	
Color of raw cotton: 4/						
Reflectance-----Rd	75.8	69.6	75.4	72.5	73.4	
Yellowness-----+b	9.3	9.7	8.6	9.9	9.3	
Sugar content-----percent	0.3	0.2	0.3	0.2	0.1	
Acid-alkaline value-----pH units 5/	6.5	6.4	7.7	7.4	6.4	
Processing Results						
Picker and card waste-----percent	10.0	10.3	8.8	9.5	10.0	
Neps-----per 100 sq. in. of card web	21	21	18	19	13	
Yarn skein strength:						
22s-----pounds	100	103	110	97	106	
50s-----pounds	32	34	36	28	35	
Average break factor 6/	1900	1983	2110	1767	2041	
Yarn appearance:						
22s-----grade	B	C+	B	C+	C+	
50s-----grade	C+	C	C	C+	C	
Average index 7/	105	95	100	100	95	

- 1/ Fiber fineness and maturity in combination, as measured on untreated samples.
- 2/ Determined by the Causticaire method using the Micronaire instrument.
- 3/ Index of 100 equals a Pressley ratio of 3.19, which was the average strength of 1954 commercial crop of upland cotton in the United States.
- 4/ Determined by the Nickerson-Hunter Colorimeter on raw stock. Rd values indicate percent reflectance from 0 to 100 and +b values indicate degree of yellowness.
- 5/ Values below 7.0 indicate acidity. Values above 7.0 indicate alkalinity which when associated with abnormally low sugar content may indicate fiber degradation from the action of micro-organisms.
- 6/ Based on yarn skein strength of the two yarn numbers spun.
- 7/ Based on two numbers spun. Index of average quality equals 100.

